

Patent Abstracts of Japan

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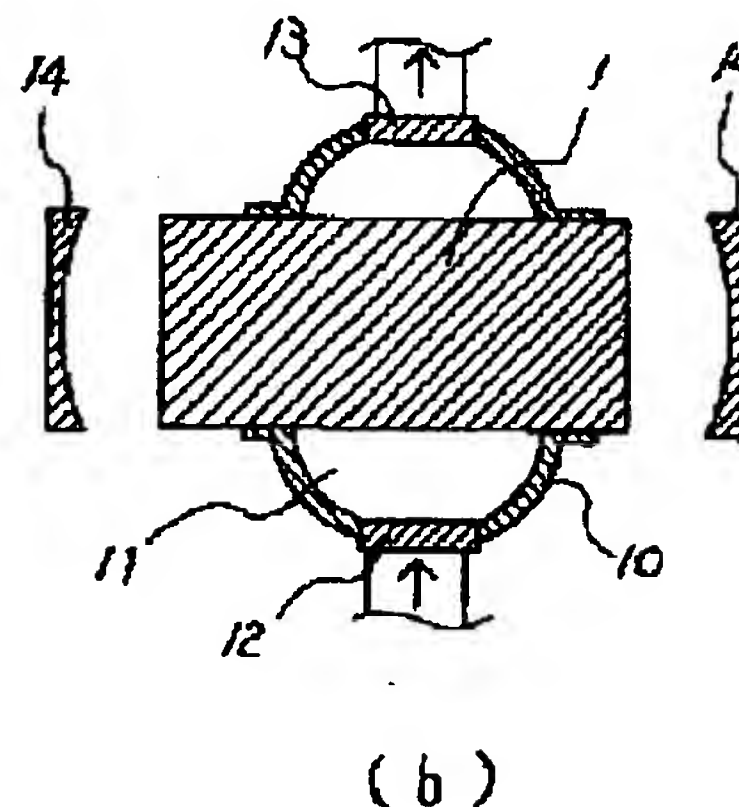
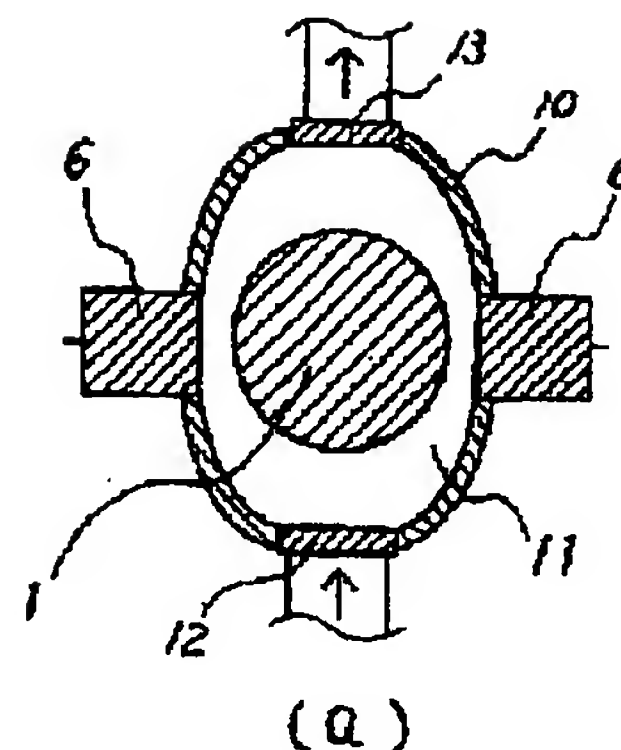
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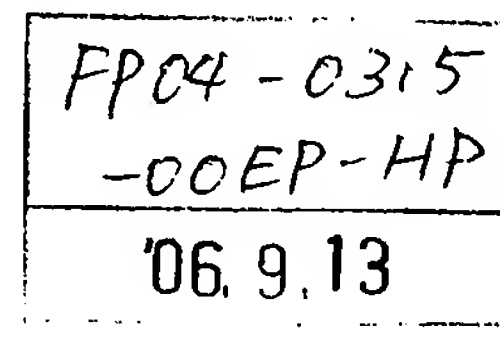
TITLE : SOLID-STATE LASER OSCILLATOR



ABSTRACT : PURPOSE: To obtain a solid-state laser oscillator which enhances the incident efficiency of exciting light on a laser rod from an exciting light source by a method wherein the exciting light source and the laser rod are held in a hollow container to bring coolant into contact with the exciting light source and the laser rod and to make the coolant flow and cool down.

CONSTITUTION: An exciting light source (LD) 6 is provided at the side part of a container 10, and only an edge from which exciting light is radiated is formed so as to be exposed inside the container 10. The inside of the container 10 is filled with silicone oil 11. The exciting light which is radiated from the LD 6 is propagated inside the silicone oil 11 so as to directly enter a laser rod 1. In the container 10, the silicone oil 11 as a coolant is circulated from a coolant introduction port 12 formed at the lower part of the container to a coolant discharge port 13 formed at the upper part of the container, it comes into contact with the laser rod 1 and with the LD 6, and generated heat is discharged to the outside of the container 10. Thereby, the discontinuity of a refractive index between the LD 6 and the laser rod 1 is removed, and the transmission efficiency of the exciting light can be enhanced.

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